

A NEW *DROSERA* FROM THE SECTION ARACHNOPUS?

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In Czechoslovakia, 2 types of *Drosera adelae* are grown. The first one is characterized by red flowers, the second one by whitish flowers (see photos). The leaf rosettes are very similar. Both of these types easily could be taken for a coloured form of the same species. Surprisingly, in spite of this fact, the significant differences can be found in the flower organs.

The red type has flattened, lobed stigmata; the whitish type is characterized by clubshaped stigmata. The bifurcation of the styles of the first order is to be found in a different place. The styles of the red type are erect, the styles of the whitish type are pressed down to the ovary (see fig. 1 and 2). Unlike the whitish type, the red type is proterogynic (the stigma is active a few days before the pollen is poured out of the stamens). The pollen of the red type is by a quarter smaller than the pollen of the whitish one (see tab. 1). The red type is allogamic, while the whitish one is autogamic.

Tab. 1 Magnitude of pollen grains (in millimetres) of different types of *Drosera adelae* and the related species.

	<i>D. adelae</i> red type	<i>D. adelae</i> whitish type	<i>D. prolifera</i>	<i>D. schizandra</i>
the largest grain	0.038	0.048	0.040	0.044
the smallest grain	0.026	0.036	0.036	0.040
average of 10 pieces	0.030	0.043	0.039	0.043

It might be presumed that the red type is a hybrid between *D. adelae* and some closely related species (*D. prolifera* or *D. schizandra*; *D. indica* is not taken into account because it is an evolutionarily separated species (see Laverack 1979). But such a hypothesis is not supported by a comparison of the pistil's shape in these species (fig. 2).

The different generative organs of these types also hardly could generate suddenly in consequence of one mutation (for example polyploidisation). These complicated differences might arise most probably by gradual, considerably long-termed evolution of separated populations. Both these types of *D. adelae* indeed present closely related but phylogenetically different taxa. Probably they are not artificially produced cultivars, although they were identified in a culture.

Which of them is, however, the "real" *D. adelae*? This question is answered neither in Diels (1906) nor in Flora of Australia (Marchant et George 1982). Perhaps some of our Australian colleagues might thoroughly study the nomenclatoric type deposited in the herbarium in Melbourne?

See FIGURES 1 and 2 on page 14.

Color types of *Drosera adelsae*



Drosera adelsae - whitish type



D. adelsae - red type

References

- Diels L. 1906: Droseraceae.-In: Engler A. (red.), Pflanzenreich IV, 112: 1-136, Leipzig.
Lavarack P.S. 1979: Rainforest *Drosera* of North Queensland.-CPN 8: 61-64.
Marchant N.G. et George A.S. 1982: *Drosera*.-In: Briggs B.G. et al. (red.), Flora of Australia, vol. 8: 9-64, Canberra.

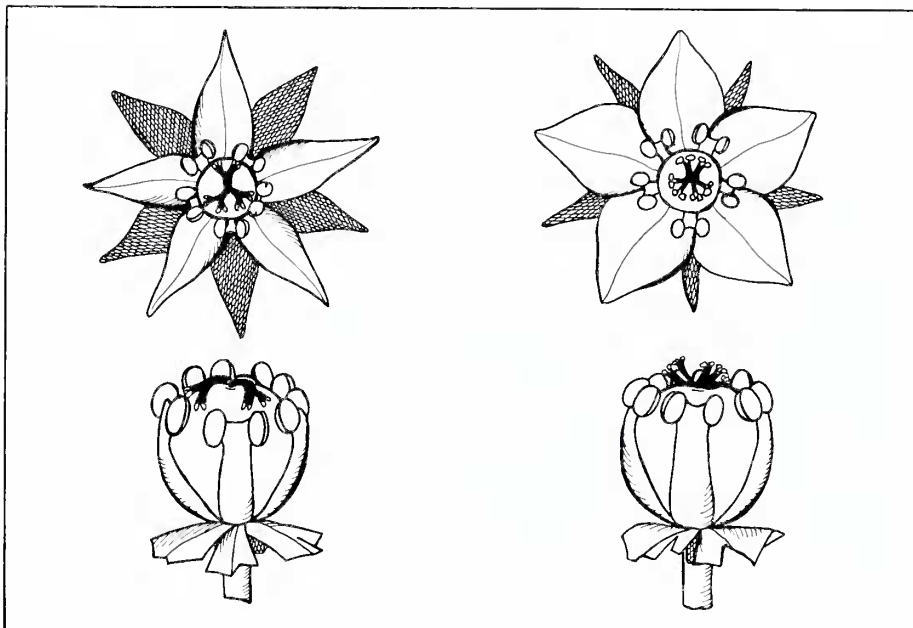


Fig. 1 Flowers and sexual organs of *Drosera adelaе* - whitish type (left) and *D. adelaе* - red type (right).

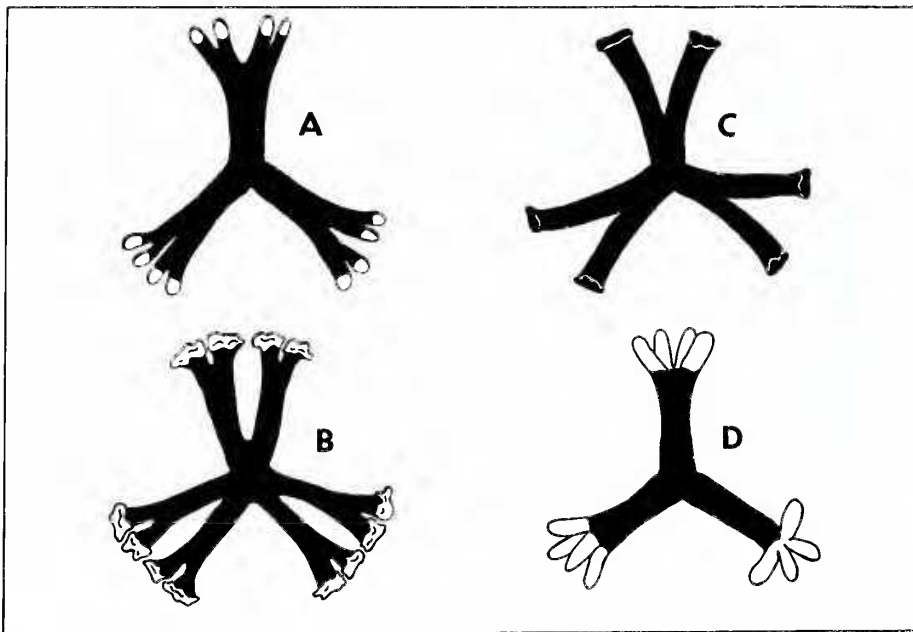


Fig. 2 Styles and stigmata of *Drosera adelaе*- whitish type (A), *D. adelaе* - red type (B), *D. prolifera* (C) and *D. schizandra* (D). (Drawings by Regina Studnickova.)